

## **IN THE CLAIMS**

Please delete claims 1-37, and add new claims 38-74 as follows:

38. (New) A polypeptide having at least 80% homology to the amino acid sequence of SEQ ID NO: 1; having an amino acid sequence, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1.
39. (New) The polypeptide according to claim 38, wherein the homology is at least 90%.
40. (New) The polypeptide according to claim 38, wherein the homology is at least 95%.
41. (New) A polypeptide comprising the amino acid sequence of SEQ ID NO: 1.
42. (New) A polypeptide fragment having a partial sequence of the amino acid sequence of SEQ ID NO: 1; or a partial sequence of an amino acid sequence having at least 80% homology to the amino acid sequence of SEQ ID NO: 1, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide according to claim 41.

43. (New) A composition for producing an antibody specific to a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, comprising at least one selected from the group consisting of a polypeptide having at least 80% homology to the amino acid sequence of SEQ ID NO: 1; having an amino acid sequence, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro 299, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, and a polypeptide fragment having a partial sequence of the amino acid sequence of SEQ ID NO: 1; or a partial sequence of an amino acid sequence having at least 80% homology to the amino acid sequence of SEQ ID NO: 1, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1.
44. (New) A method for the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, comprising administering a composition for producing an antibody specific to a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, comprising at least one selected from the group consisting of a polypeptide having at least 80% homology to the amino acid sequence of SEQ ID NO: 1; having an amino acid sequence, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an

amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, and a polypeptide fragment having a partial sequence of the amino acid sequence of SEQ ID NO: 1; or a partial sequence of an amino acid sequence having at least 80% homology to the amino acid sequence of SEQ ID NO: 1, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, to a mammal.

45. (New) An antibody specifically binding to a polypeptide according to claim 41.
46. (New) The antibody according to claim 45, wherein the antibody is a polyclonal antibody or a monoclonal antibody.
47. (New) A diagnostic kit for liver cancer or a precancerous condition of the liver, comprising an antibody according to claim 45.
48. (New) A polynucleotide coding for a polypeptide having at least 80% homology to the amino acid sequence of SEQ ID NO: 1; having an amino acid sequence, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at

position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide according to claim 41.

49. (New) The polynucleotide according to claim 48, wherein the homology is at least 90%.
50. (New) The polynucleotide according to claim 48, wherein the homology is at least 95%.
51. (New) A polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1.
52. (New) A polynucleotide coding for a polypeptide fragment having a partial sequence of the amino acid sequence of SEQ ID NO: 1; or a partial sequence of an amino acid sequence having at least 80% homology to the amino acid sequence of SEQ ID No: 1, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide according to claim 41.
53. (New) A polynucleotide comprising a nucleotide sequence from positions 436 to 1413 of SEQ ID NO: 2.
54. (New) A vector comprising a polynucleotide according to claim 48.

55. (New) A vector comprising a polynucleotide according to claim 51.
56. (New) A vector comprising a polynucleotide according to claim 52.
57. (New) A vector comprising a polynucleotide according to claim 53.
58. (New) A host cell transformed with a vector according to claim 54
59. (New) A method for the production of a polypeptide having at least 80% homology to the amino acid sequence of SEQ ID NO: 1; having an amino acid sequence, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro 299, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, or comprising the amino acid sequence of SEQ ID NO: 1, or a polypeptide fragment having a partial sequence of the amino acid sequence of SEQ ID NO: 1; or a partial sequence of an amino acid sequence having at least 80% homology to the amino acid sequence of SEQ ID NO: 1, wherein at least an amino acid residue at position 39, 85, 296, or 300 from the N-terminus is Ala, an amino acid residue at position 86 or 310 is Thr, an amino acid residue at position 163 or 303 is Ser, an amino acid residue at position 195 or 257 is Leu, an amino acid residue at position 271 is Arg, an amino acid residue at position 297 is Asp, an amino acid residue at position 299 is Gly, an amino acid residue at position 313 is Pro, or an amino acid residue at position 316 is Val, in correspondence with the amino acid sequence of SEQ ID NO: 1; and having immunogenicity inducing the production of an antibody against a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, comprising culturing a host cell transformed with a vector comprising a polynucleotide under a condition capable of producing the polypeptide or the polypeptide fragment and then collecting the polypeptide or the polypeptide fragment.

60. (New) A PCR primer comprising at least 15 nucleotides corresponding to a polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1.
61. (New) A PCR primer comprising at least 15 nucleotides corresponding to a polynucleotide complementary to a polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1.
62. (New) A method for detecting a polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, comprising using PCR primers comprising at least 15 nucleotides corresponding to a polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, and comprising at least 15 nucleotides corresponding to a polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, to perform PCR.
63. (New) A kit that detects a polynucleotide coding for a polynucleotide comprising the amino acid sequence of SEQ ID NO: 1, comprising PCR primers comprising at least 15 nucleotides corresponding to a polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1, and comprising at least 15 nucleotides corresponding to a polynucleotide complementary to a polynucleotide coding for a polypeptide comprising the amino acid sequence of SEQ ID NO: 1.
64. (New) An RNA molecule comprising 15 to 25 nucleotide pairs, comprising a nucleotide sequence corresponding to a partial sequence of a nucleotide sequence from positions 436 to 1413 of SEQ ID NO: 2, or a mutant nucleotide sequence of the nucleotide sequence with the addition, deletion, or substitution of at least one base, and suppressing the expression of a protein specific to human liver cancer.
65. (New) The RNA molecule according to claim 64, comprising 18 to 24 nucleotide pairs.

66. (New) The RNA molecule according to claim 64, comprising 21 to 23 nucleotide pairs.
67. (New) The RNA molecule according to claim 64, wherein the specific protein is a protein having the amino acid sequence of SEQ ID NO: 1 or a mutant protein thereof.
68. (New) The RNA molecule according to claim 67, wherein the mutant protein is a protein having an amino acid sequence having 80% homology to the amino acid sequence of SEQ ID NO: 1.
69. (New) The RNA molecule according to claim 67, wherein the mutant protein is a protein having an amino acid sequence having 90% homology to the amino acid sequence of SEQ ID NO: 1.
70. (New) The RNA molecule according to claim 67, wherein the mutant protein is a protein having an amino acid sequence having 95% homology to the amino acid sequence of SEQ ID NO: 1.
71. (New) An RNA molecule comprising the nucleotide sequence of SEQ ID NO: 10.
72. (New) An RNA molecule comprising a mutant nucleotide sequence of the nucleotide sequence of SEQ ID NO: 10 with the addition, deletion, or substitution of at least one base, and suppressing the expression of a protein specific to human liver cancer.
73. (New) The RNA molecule according to claim 64, wherein the RNA molecule has a hydroxyl group at the 3' end.
74. (New) A pharmaceutical composition that suppresses the expression of a protein specific to human liver cancer, comprising an RNA molecule according to claim 64.
75. (New) A method for the production of a knockout cell, comprising introducing an RNA molecule according to claim 65 to a cell expressing a protein specific to human liver cancer or a mutant protein thereof, and maintaining the cell under a condition

bringing about RNA interference by the RNA molecule, to degrade mRNA transcribed from a gene coding for the specific protein or the mutant protein thereof.

- 76. (New) A knockout cell produced by a method according to claim 75.
- 77. (New) A kit for the functional analysis of a protein specific to human liver cancer, comprising an RNA molecule according to claim 64.